

### **Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims in the application.

#### **Listing of Claims**

- Claim 1. (Currently Amended) A peptide ~~which~~ that inhibits T-cell antigen receptor (TCR) function, ~~wherein the peptide~~ that is of the following formula:
- R1-X-Z-X-R2 in which
- X is a hydrophobic amino acid or a hydrophobic peptide sequence consisting of between 2 and 6 amino acids,
- Z is a charged amino acid
- R1 is NH<sub>2</sub> and
- R2 is COOH,
- wherein the hydrophobic peptide sequence does not include a charged amino acid, and
- wherein the peptide is at least seven amino acids in length.
- Claim 2. (Canceled)
- Claim 3. (Previously Presented) The peptide according to claim 1 wherein at least 50% of the amino acids which make up the hydrophobic peptide sequence are hydrophobic amino acids.
- Claim 4. (Previously Presented) The peptide according to claim 1 wherein Z is selected from Arg and Lys.
- Claim 5. (Previously Presented). The peptide according to claim 1 which has the formula
- NH<sub>2</sub>-Ile-Leu-Leu-Leu-Lys-Val-Ala-Gly-Phe-OH (SEQ ID NO. 6),
- NH<sub>2</sub>-Ile-Leu-Leu-Leu-Lys-Val-Ala-Gly-OH (SEQ ID NO. 7),
- NH<sub>2</sub>-Leu-Arg-Ile-Leu-Leu-Leu-Gly-Val-OH (SEQ ID NO. 8),
- NH<sub>2</sub>-Leu-Gly-Ile-Leu-Leu-Leu-Lys-Val-OH (SEQ ID NO. 9),

NH<sub>2</sub>-Ile-Leu-Leu-Gly-Lys-Ala-Thr-Leu-Tyr-OH (SEQ ID NO. 10),  
NH<sub>2</sub>-Met-Gly-Leu-Arg-Ile-Leu-Leu-Leu-OH (SEQ ID NO. 11), or  
NH<sub>2</sub>-Leu-Leu-Met-Thr-Leu-Arg-Leu-Trp-Ser-Ser-COOH (SEQ ID NO. 12).

Claim 6. (Previously Presented) The peptide according to claim 1 wherein Z is selected from aspartic acid and glutamic acid.

Claim 7. (Original) A peptide according to claim 6 wherein the peptide has the formula  
NH<sub>2</sub>-Ile-Ile-Val-Thr-Asp-Val-Ile-Ala-Thr-Leu-OH,  
NH<sub>2</sub>-Ile-Val-Ile-Val-Asp-Ile-Cys-Ile-Thr-OH, or  
NH<sub>2</sub>-Phe-Leu-Phe-Ala-Glu-Ile-Val-Ser-Ile-OH.

Claim 8. (Previously Presented) A peptide which inhibits TCR function, wherein the peptide is derived from the TCR- $\alpha$  intracellular chain and comprises the formula:

NH<sub>2</sub>-Ala-Gly-Phe-Asn-Leu-Leu-Met-Thr-COOH (SEQ ID NO. 16).

Claim 9. (Withdrawn) A peptide which inhibits TCR function, wherein the peptide is of the following formula:-

R<sub>1</sub>-A-B-C-R<sub>2</sub> in which

A is a peptide sequence of between 0 and 5 amino acids;

B is cysteine;

C is a peptide sequence of between 2 to 10 amino acids;

R<sub>1</sub> is NH<sub>2</sub>; and

R<sub>2</sub> is COOH.

Claim 10. (Withdrawn) A peptide according to claim 9 wherein A is a peptide sequence comprising 5 amino acids.

Claim 11. (Withdrawn) A peptide according to claim 9 wherein C is a peptide sequence of 4 or 5 amino acids and includes at least one hydrophobic amino acid.

- Claim 12. (Previously Presented). A peptide which inhibits T-Cell antigen receptor function wherein the peptide has the formula:
- NH<sub>2</sub>-Tyr-Gly-Arg-Ala-Asp-Cys-Gly-Ile-Thr-Ser-OH (SEQ ID NO. 17), or  
NH<sub>2</sub>-Trp-Gly-Arg-Ala-Asp-Cys-Gly-Ile-Thr-Ser-OH (SEQ ID NO. 18), or  
NH<sub>2</sub>-Tyr-Gly-Arg-Ala-Asp-Cys-Ile-Thr-Ser-OH (SEQ ID NO. 19), or  
NH<sub>2</sub>-Ser-Ser-Asp-Val-Pro-Cys-Asp-Ala-Thr-Leu-Thr-OH (SEQ ID NO. 20).
- Claim 13. (Previously Presented) A therapeutic composition active against disorders in which T-cells are involved or recruited comprising a peptide as claimed in claim 1 and a pharmaceutically acceptable carrier.
- Claim 14. (Withdrawn) A method of treating a subject suffering from a disorder in which T-cells are involved or recruited, the method including administering to the subject a therapeutically effective amount of the composition as claimed in claim 11.
- Claim 15. (Canceled)
- Claim 16. (New) A peptide which inhibits T-cell antigen receptor (TCR) function, which has the formula
- NH<sub>2</sub>-Ile-Leu-Leu-Leu-Lys-Val-Ala-Gly-Phe-OH (SEQ ID NO. 6),  
NH<sub>2</sub>-Ile-Leu-Leu-Leu-Lys-Val-Ala-Gly-OH (SEQ ID NO. 7),  
NH<sub>2</sub>-Leu-Arg-Ile-Leu-Leu-Leu-Gly-Val-OH (SEQ ID NO. 8),  
NH<sub>2</sub>-Leu-Gly-Ile-Leu-Leu-Leu-Lys-Val-OH (SEQ ID NO. 9),  
NH<sub>2</sub>-Ile-Leu-Leu-Gly-Lys-Ala-Thr-Leu-Tyr-OH (SEQ ID NO. 10),  
NH<sub>2</sub>-Met-Gly-Leu-Arg-Ile-Leu-Leu-Leu-OH (SEQ ID NO. 11), or  
NH<sub>2</sub>-Leu-Leu-Met-Thr-Leu-Arg-Leu-Trp-Ser-Ser-COOH (SEQ ID NO. 12).
- Claim 17. (New) A peptide according to claim 16, wherein the peptide has the formula
- NH<sub>2</sub>-Ile-Ile-Val-Thr-Asp-Val-Ile-Ala-Thr-Leu-OH  
NH<sub>2</sub>-Ile-Val-Ile-Val-Asp-Ile-Cys-Ile-Thr-OH, or

NH<sub>2</sub>-Phe-Leu-Phe-Ala-Glu-Ile-Val-Ser-Ile-OH.

Claim 18. (New) A peptide that inhibits T-cell antigen receptor (TCR) function and that is of the following formula:

$R_1-X_1-Z-X_2-R_2$

in which  $X_1$  is an amino acid selected from the group consisting of alanine, isoleucine, leucine, valine, glycine, methionine, threonine, phenylalanine, tryptophan and serine,

$X_2$  is an amino acid selected from the group consisting of glycine, alanine, valine, leucine, isoleucine, threonine, , methionine, glutamine, and cysteine,

Z is a charged amino acid,

$R_1$  is NH<sub>2</sub>, and

$R_2$  is COOH,

wherein the hydrophobic peptide sequence does not include a charged amino acid, and

wherein the peptide is at least seven amino acids in length.

Claim 19. (New) The peptide according to claim 1, in which

$X_1$  is an amino acid selected from the group consisting of alanine, isoleucine, leucine, valine, glycine, methionine, threonine, phenylalanine, tryptophan and serine, and

$X_2$  is an amino acid selected from the group consisting of glycine, alanine, valine, leucine, isoleucine, threonine, methionine, glutamine, and cysteine.

Claim 20. (New) The peptide according to claim 18, wherein at least 50% of the amino acids which make up the hydrophobic peptide sequence are hydrophobic amino acids.

- Claim 21. (New) The peptide according to claim 18, wherein Z is selected from arginine and lysine.
- Claim 22. (New) The peptide according to claim 18, wherein Z is selected from the aspartic acid and glutamic acid.
- Claim 23. (New) A therapeutic composition active against disorders in which T-cells are involved or recruited comprising a peptide as claimed in claim 18, and a pharmaceutically-acceptable carrier.
- Claim 24. (New) A method of treating a subject suffering from a disorder in which T-cells are involved or recruited, the method including administering to the subject a therapeutically effective amount of the composition as claimed in claim 18.